Nutritional intake and body composition of adolescent soccer player of two different levels of performance

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Soccer participation worldwide is increasing and every club try to discover new talents. It is well know that there is an important correlation between body composition (BC) and talent detection (TD) and when coaches and selectors choose players, they tend to choose them with optimum BC. It is also a fact that when the performance level of team sports increases, players become leaner, bigger, and taller. Optimum BC depends of individual genetics, but also has strong dependence of the nutritional intake (NI) of players. Our aim was to investigate the relationship between nutrition and BC in two football teams with identical training load but different level of performance and to observe the influence of diet and corporal composition in TD. A descriptive study was carried out with 14 players (17.5±0.7 years old) from the same club: 8 belonging to the higher level team (A) and 6 at a lower level (B) differentiated according to the subjective criterion of coach. NI was assessed with 7 day dietary record (household measures). Anthropometric measures were taken (ISAK) and fat (Slaughter *et al*, Hum Biol 1988, 60 (5), 709-723) and muscle (Poortmans et al., MSSE 2005, 37[2], 316-322) percentages were calculated. For team comparison a Mann-Whitney U was used, and also a Pearson`s correlations were calculated between variables. Statistical significance was set at $p < .05$. In general, players did not meet nutritional recommendations, with an important deficiency in carbohydrate intake (4.4±0.5g/Kg Weight (W)/day for team A and 4.5±0.5g/Kg W/day for team B). When teams were compared, it has been observed a significant difference in protein consumption (120±13.1g for team A and 105.2±9.8g for team B; $p < .05$). Moreover, team A had leaner bodies (11.1±1.5% fat mass for team A and 17.8±6.7 % for team B ($p < .05$) and it was a negative correlation between % fat mass and protein intake ($p< .05$). Muscle mass did not show significant difference between groups.This study shows an important correlation between TD and BC and between NI and some anthropometric parameters. Therefore, it could be assumed that exits an indirect relationship between nutritional intake of this athletes and TD, so that noncompliance with recommendations could be limiting the maximum potential development of this athletes and therefore cause a loss of potential talents.